

explanatory only, and are not to be viewed as in any way restricting the scope of the invention as set forth in the claims.

PREFERRED EMBODIMENT OF THE INVENTION

The Examples below are indicative of the particularly preferred embodiment within the scope of the invention:

EXAMPLE 1

A fabric substrate was produced having a cover factor of about 1560 was produced on a water-jet loom. This fabric comprised nylon-6,6 yarns having deniers of about 100 packed together to form 78 picks/inch and 78 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A film of polyurethane having about 2-3 mils average thickness was then laminated to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability at 124 Pa at about 25° C. Such permeability was measured to be 0.

EXAMPLE 2

A fabric substrate was produced having a cover factor of about 1594 was produced on a water-jet loom. This fabric comprised nylon-6,6 yarns having deniers of about 210 packed together to form 55 picks/inch and 55 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A film of polyurethane having an average thickness of 2-3 mils was then laminated to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability under 124 Pa at about 25° C. Such permeability was measured to be 0.

EXAMPLE 3

A fabric substrate was produced having a cover factor of about 1597 was produced on a water-jet loom. This fabric comprised nylon-6,6 yarns having deniers of about 315 packed together to form 45 picks/inch and 45 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A film of polyurethane having an average thickness of about 2-3 mils was then laminated to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability under 124 Pa at about 25° C. Such permeability was measured to be 0.

EXAMPLE 4

A fabric substrate was produced having a cover factor of about 1476 was produced on a water-jet loom. This fabric comprised nylon-6,6 yarns having deniers of about 420 packed together to form 36 picks/inch and 36 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A film of polyurethane having an average thickness of about 2-3 mils was then laminated to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability under 124 Pa at about 25° C. Such permeability was measured to be 0.

EXAMPLE 5

A fabric substrate was produced having a cover factor of about 1375 was produced on a water-jet loom. This fabric comprised nylon-6,6 yarns having deniers of about 525 packed together to form 30 picks/inch and 30 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A film of polyurethane having an average thickness of 2-3 mils was then laminated to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability under 124 Pa at about 25° C. Such permeability was measured to be 0.

EXAMPLE 6

A fabric substrate was produced having a cover factor of about 1305 was produced on a water-jet loom. This fabric comprised nylon-6,6 yarns having deniers of about 630 packed together to form 26 picks/inch and 26 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A film of polyurethane having an average thickness of 2-3 mils was then laminated to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability under 124 Pa at about 25° C. Such permeability was measured to be 0.

EXAMPLE 7

A fabric substrate was produced having a cover factor of about 1844 was produced on a Jacquard loom. This fabric comprised nylon-6,6 yarns having deniers of about 420 packed together to form 46 picks/inch and 46 ends/inch. The woven fabric was then coated with a common isocyanate bonding agent, in an amount of about 0.6 ounces per square yard of fabric. A coating of polyurethane possessing an average viscosity of roughly 20,000 centipoise at 1 atmosphere and at 25° C. was then applied to the surface of the treated fabric substrate and heated to a temperature of about 325° F. The composite was then allowed to cool and was then tested for its air permeability under 124 Pa at about 25° C. Such permeability was measured to be 0.

While specific embodiments of the invention have been illustrated and described, it is to be understood that the invention is not limited thereto, since modifications may certainly be made and other embodiments of the principals of this invention will no doubt occur to those skilled in the art. Therefore, it is contemplated by the appended claims to cover any such modifications and other embodiments as incorporate the features of this invention which in the true spirit and scope of the claims hereto.

What I claim is:

1. An airbag fabric for incorporation within an airbag cushion comprising a woven fabric substrate, at least a portion of which is coated or laminated, wherein said woven fabric substrate has a cover factor below about 1900, and wherein the air permeability of said airbag fabric is less than about 0.5 cfm under 124 Pa pressure at about 25° C.
2. The airbag fabric of claim 1 wherein said woven fabric substrate is coated or laminated with a coating or film selected from the group consisting of polyurethane, polyacrylate, polyamide, polyester, and copolymers thereof.
3. The airbag fabric of claim 1 wherein said cover factor is below about 1800.
4. The airbag fabric of claim 3 wherein said cover factor is below about 1775.

5. The airbag fabric of claim 4 wherein said cover factor below about 1750.
6. The airbag fabric of claim 5 wherein said coating or laminate comprises polyurethane.
7. The airbag fabric of claim 6 wherein the thickness of said coating or laminate is from 0.1 to about 3.5 mils.
8. An airbag cushion comprising the airbag fabric of claim 6.
9. An airbag cushion comprising the airbag fabric of claim 7.
10. The airbag fabric of claim 4 wherein said coating or laminate comprises polyurethane.
11. The airbag fabric of claim 10 wherein the thickness of said coating or laminate is from 0.1 to about 3.5 mils.
12. An airbag cushion comprising the airbag fabric of claim 11.
13. An airbag cushion comprising the airbag fabric of claim 10.

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14. The airbag fabric of claim 3 wherein said coating or laminate comprises polyurethane.
15. The airbag fabric of claim 14 wherein the thickness of said coating or laminate is from 0.1 to about 3.5 mils.
16. An airbag cushion comprising the airbag fabric of claim 15.
17. An airbag cushion comprising the airbag fabric of claim 14.
18. The airbag fabric of claim 1 wherein the thickness of said coating or laminate is from 0.1 to about 3.5 mils.
19. An airbag cushion comprising the airbag fabric of claim 18.
20. An airbag cushion comprising the airbag fabric of claim 1.

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